

IN THE CLAIMS

1. (canceled)

2. (currently amended) A method for creating a partition in a storage device, the method comprising:

receiving a request to create a partition having a requested size of 2 to n-th power, where n is a natural number,

referring to a table containing disposition information of partitions in the storage device,

determining whether there is an empty region in the storage device having a size equal to the requested size based on the disposition information and, if so, disposing the partition in that empty region,

when an empty region having the requested size does not exist, determining, based on the disposition information, whether there is an empty region having a size 2^k times as large as the requested size (where k is a natural number) ~~when an empty region having the requested size does not exist,~~ and, if so, successively performing the steps of:

a) dividing that empty region ~~by 2~~ in half to obtain two divided empty regions;

~~until the size of the divided empty region becomes equal to the requested size, and~~

b) when the size of one of the divided empty regions is equal to the requested size, disposing the partition in the one divided empty region of the storage device, ~~and;~~

c) when the size of each of the divided empty regions is at least twice as large as the requested size, assigning a single one of the divided empty regions obtained in step a) as the empty region; and

d) repeating steps a) through c) only as to the single divided empty region assigned in step c) until the size of one of the divided empty regions obtained by repeating step

a) is equal to the requested size and the partition is disposed in the one divided empty region; and

disposing the partition in a region where a partition can be created, the region being a position that can be aligned with the requested size when there is neither a region having the requested size nor a region having 2k times the requested size.

3. (previously presented) The method according to claim 2, wherein the step of receiving the request to create a partition includes receiving a request to create a partition of an arbitrary size, and adopting, as the requested size, a size of 2 to the n-th power, where n is at a minimum that meets the size of the received request.

4. (previously presented) A method of managing one or more partitions of a storage device comprising the method for creating a partition as claimed in claim 2, said method of managing further comprising:

receiving information specifying a partition to be deleted; and

referring to a table containing disposition information concerning the partition in the storage device, and

determining whether a region before or after the partition to be deleted is an empty region, and whether a region obtained by combining the empty region and the partition to be deleted can be aligned with a total size of the empty region and the partition to be deleted, and, if so, combining the empty region and a region having the partition deleted therefrom.

5. (canceled)

6. (currently amended) A storage medium containing a computer program for causing a computer to execute actions comprising:

receiving a request to create a partition having a requested size of 2 to n-th power, where n is a natural number; and

referring to a table containing disposition information concerning a partition in a storage device,

determining whether there is an empty region in the storage device having a size equal to the requested size based on the disposition information and, if so, disposing the partition in that empty region,

when an empty region having the requested size does not exist, determining, based on the disposition information, whether there is an empty region having a size 2^k times as large as the requested size (where k is a natural number) ~~when an empty region having the requested size does not exist, and, if so, successively performing the steps of:~~

a) dividing that empty region by $2^{1/n}$ half to obtain two divided empty regions;

~~until the size of the divided empty region becomes equal to the requested size, and~~

b) when the size of one of the divided empty regions is equal to the requested size, disposing the partition in the one divided empty region of the storage device, and;

c) when the size of each of the divided empty regions is at least twice as large as the requested size, assigning a single one of the divided empty regions obtained in step a) as the empty region; and

d) repeating steps a) through c) only as to the single divided empty region assigned in step c) until the size of one of the divided empty regions obtained by repeating step

a) is equal to the requested size and the partition is disposed in the one divided empty region; and

disposing the partition in a region where a partition can be created, the region being a position aligned with the requested size when there is neither a region having the requested size nor a region having 2k times the requested size.

7. (previously presented) The storage medium according to claim 6, wherein the step of receiving the request to create a partition includes receiving a request to create a partition of an arbitrary size, and adopting, as the requested size, a size of 2 to the n-th power, where n is at a minimum that meets the size of the received request.

8. (previously presented) A storage medium as claimed in claim 6, wherein said computer program is further executable to cause the computer to execute a process including:

receiving information specifying a partition to be deleted; and

referring to a table containing disposition information concerning the partition in the storage device, and

determining whether a region before or after the partition to be deleted is an empty region, and whether a region obtained by combining the empty region and the partition to be deleted can be aligned with a total size of the empty region and the partition to be deleted, and, if so, combining the empty region and the region having the partition deleted therefrom.

9. (canceled)

10. (currently amended) An information processing apparatus, comprising:

means for receiving a request to create a partition having a requested size of 2 to n-th power, where n is a natural number; and

means for referring to a table containing disposition information concerning partitions in a storage device, for determining whether there is an empty region in the storage device having a size equal to the requested size, and for disposing the partition in that empty region,

means for determining, based on the disposition information, when an empty region having the requested size does not exist, whether there is an empty region having a size 2^k times as large as the requested size (where k is a natural number) when an empty region having the requested size does not exist, and, if so, successively for performing the steps of:

a) dividing that empty region by 2 in half to obtain two divided empty regions;

~~until the size of the divided empty region becomes equal to the requested size, and~~

b) when the size of one of the divided empty regions is equal to the requested size, disposing the partition in the one divided empty region of the storage device, and;

c) when the size of each of the divided empty regions is at least twice as large as the requested size, assigning a single one of the divided empty regions obtained in step a) as the empty region; and

d) repeating steps a) through c) only as to the single divided empty region assigned in step c) until the size of one of the divided empty regions obtained by repeating step a) is equal to the requested size and the partition is disposed in the one divided empty region; and

means for disposing the partition in a region where a partition can be created, the region being a position aligned with the requested size, when there is neither a region having

the requested size nor a region having 2k times as large as the requested size.

11. (previously presented) The information processing apparatus according to claim 10, wherein said means for receiving a request is operable to receive a request to create a partition of an arbitrary size, and to adopt, as the requested size, a size of 2 to the n-th power, where n is at a minimum that meets the size of the received request.

12. (previously presented) An information processing apparatus as claimed in claim 10, said information processing apparatus further comprising:

means for receiving information for specifying a partition to be deleted; and

means for referring to a table containing disposition information concerning the partition in the storage device, and when a region before or after the partition to be deleted is an empty region, and if a region obtained by combining the empty region and the partition to be deleted is aligned with a total size of the empty region and the partition to be deleted, for combining the empty region and the region having the partition deleted therefrom.

13-17. (canceled)

18. (currently amended) A storage device having a partition that is created according to a method comprising:

receiving a request to create a partition having a requested size of 2 to n-th power, where n is a natural number,

referring to a table containing disposition information of partitions in the storage device,

determining whether there is an empty region in the storage device having a size equal to the requested size based on the disposition information and, if so, disposing the partition in that empty region,

when an empty region having the requested size does not exist, determining, based on the disposition information, whether there is an empty region having a size $2k$ times as large as the requested size (where k is a natural number) ~~when an empty region having the requested size does not exist,~~ and, if so, successively performing the steps of:

a) dividing that empty region ~~by 2~~ in half to obtain two divided empty regions;

~~until the size of the divided empty region becomes equal to the requested size, and~~

b) when the size of one of the divided empty regions is equal to the requested size, disposing the partition in the one divided empty region of the storage device, ~~and;~~

c) when the size of each of the divided empty regions is at least twice as large as the requested size, assigning a single one of the divided empty regions obtained in step a) as the empty region; and

d) repeating steps a) through c) only as to the single divided empty region assigned in step c) until the size of one of the divided empty regions obtained by repeating step a) is equal to the requested size and the partition is disposed in the one divided empty region; and

disposing the partition in a region where a partition can be created, the region being a position that can be aligned with the requested size when there is neither a region having the requested size nor a region having $2k$ times the requested size.

19. (previously presented) The storage device of claim 18, wherein the step of receiving the request to create a partition includes receiving a request to create a partition of an arbitrary size, and adopting, as the requested size, a size of 2 to the n -th power, where n is at a minimum that meets the size of the received request.